

### ABSTRACT OF THE DISCLOSURE

A virtual private network enables private communications over a shared MPLS network between two or more private networks. The virtual private networks include a first router connected to the shared MPLS network and configured to dynamically distribute first router VPN information across the shared MPLS network. The first router VPN information includes a VPN identifier which is assigned to the first router. The VPN also includes a second router connected to the shared MPLS network and configured to dynamically distribute second router VPN information across the shared MPLS network. The second router VPN information includes a VPN identifier which is assigned to the second router and which is identical to the VPN identifier assigned to the first router. The first and second routers are also configured to establish label switched paths therebetween. A method of automatically configuring virtual private networks over a shared MPLS network includes creating a link between a private network router and a shared network router. It also includes assigning a VPN identifier to the shared network router, assigning the same VPN identifier to at least one other shared network router, determining all shared network routers which are assigned the same VPN identifier, and creating at least two label switched paths between the shared network router and the other shared network routers.